THE JOURNAL OF SCHOOL HEALTH

VOL. XVII No. 9

NOVEMBER

1947

PUBLISHED BY

THE AMERICAN SCHOOL HEALTH ASSOCIATION

AMERICAN SCHOOL HEALTH ASSOCIATION

Organized 1927

Devoted to the interests and advancement of those engaged in school health activities and the service rendered by them

Officers of the American School Health Association

President:
David Van der Slice, M.D., Flint, Michigan

President-Elect:
Cyrus H. Maxwell, M.D., Albany, N. Y.

Vice-Presidents:
V. K. Volk, M.D., Saginaw, Michigan
Chairman, Membership Committee

William E. Ayling, M.D., Syracuse, N. Y.
Chairman, Program Committee

Executive Secretary and Treasurer:
A. O. DeWeese, M.D., Kent, Ohio

Editor:
Charles H. Keene, M.D., Buffalo, N. Y.

GOVERNING COUNCIL

Term Expires 1948

Ruth Blakely, Jacksonville, Fla.
Sue Thompson Gould, M.D., Hudson, N. Y.
Lon W. Morrey, D.D.S., Chicago, Ill.
Anna Neukom, R.N., Binghamton, N. Y.
Arthur T. Turner, M.D., Chicago, Ill.

Term Expires 1949

Gertrude E. Cromwell, R.N., Des Moines, Iowa
Mildred Doster, M.D., Denver, Colo.
Paul Landis, M.A., Columbus, Ohio
L. A. Pequegnot, M.D., Toronto, Canada
L. M. Smith, M.D., Pittsburgh, Penn.

Term Expires 1950

Kenneth Gibson, D.D.S. Detroit, Mich.
H. F. Kilander, Ph.D., New York, N. Y.
Paul Kinney, M.D., Altadena, Calif.
Guy N. Magness, M.D., University City, Mo.
Jean Soller

By special vote of Governing Council

Jay A. Myers, M.D., Minneapolis, Minn.

Past Presidents, Ex-Officio

S. B. McPheeters, M.D., Goldsboro, N. C.
Helen Ahrens Cary, M.D., Portland, Ore.
Walter Wilkins, M.D., Jacksonville, Fla.
All other living Past Presidents

Affiliated Associations

Am. Ass'n Health, Physical Education, and Recreation.
Ben Miller, Washington, D. C.

Michigan Ass'n.
Bernard W. Carey, M.D., Director, Children's Fund of Michigan, Detroit, Mich.

California Branch A.S.H.A.
L. Velma Seanor, Alhambra, Calif.

THE JOURNAL OF SCHOOL HEALTH

Vol. XVII NOVEMBER, 1947 No. 9

CONTENTS

The New York City Plan for Health Education in the High Schools..... 233
Franklin J. O'Brien, M.D., Ph.D.

The School Health Examinations..... 243
Charles C. Wilson, M.D.

Aids to the Diagnosis of Inadequate Nutrition..... 249
Herbert Pollack, M.D.

Report on School Nursing Policies..... 252
Gertrude E. Cromwell, Chairman

Editorial 254

Abstracts and Notes.....242, 251, 253, 256, 260

Membership 259

Bibliography 261

Meetings 262

THE JOURNAL OF SCHOOL HEALTH

Published monthly, except July and August, at Buffalo, N. Y.
THE AMERICAN SCHOOL HEALTH ASSOCIATION
3335 Main Street, Buffalo 14, New York

Editor
CHARLES H. KEENE, M.D.
University of Buffalo, Buffalo, N. Y.

Assistant Editor
GERTRUDE E. CROMWELL, R.N.
Des Moines, Iowa

SUBSCRIPTION RATES TO THE JOURNAL
Membership dues, $2.00, including $1.75 subscription. Subscription $1.75
Single copies 25c, send payment with order

Address all communications to
THE EDITOR, The Journal of School Health
3335 Main St., Buffalo 14, New York

Copyright, November, 1947, by
The American School Health Association

Entered as second-class matter at the Post-Office at Buffalo, N. Y.
October 5, 1937

SHOULD VITAMIN D BE GIVEN ONLY TO INFANTS?

VITAMIN D has been so successful in preventing rickets during infancy that there has been little emphasis on continuing its use after the second year.

But now a careful histologic study has been made which reveals a startlingly high incidence of rickets in children 2 to 14 years old. Follis, Jackson, Eliot, and Park* report that postmortem examination of 230 children of this age group showed the total prevalence of rickets to be 46.5%.

Rachitic changes were present as late as the fourteenth year, and the incidence was higher among children dying from acute disease than in those dying of chronic disease.

The authors conclude, "We doubt if slight degrees of rickets, such as we found in many of our children, interfere with health and development, but our studies as a whole afford reason to prolong administration of vitamin D to the age limit of our study, the fourteenth year, and especially indicate the necessity to suspect and to take the necessary measures to guard against rickets in sick children."

*R. H. Follis, D. Jackson, M. M. Eliot, and E. A. Park: Prevalence of rickets in children between two and fourteen years of age, Am. J. Dis. Child. 66:1-11, July 1943.

MEAD'S Oleum Percomorphum With Other Fish-Liver Oils and Viosterol is a potent source of vitamins A and D, which is well taken by older children because it can be given in small dosage or capsule form. This ease of administration favors continued year-round use, including periods of illness.

MEAD'S Oleum Percomorphum furnishes 60,000 vitamin A units and 8,500 vitamin D units per gram. Supplied in 10- and 50-cc. bottles. 83-mg. capsules now packed in bottles of 250. Ethically marketed.

MEAD JOHNSON & COMPANY, Evansville 21, Ind., U. S. A.

THE JOURNAL OF SCHOOL HEALTH

Devoted to the interests and advancement of school health service and instruction. Your participation by membership is solicited.

Vol. XVII NOVEMBER, 1947 No. 9

THE NEW YORK CITY PLAN FOR HEALTH EDUCATION IN THE HIGH SCHOOLS

FRANK J. O'BRIEN, M.D., Ph.D.

Associate Superintendent of Schools, City of New York, in charge.

Historical Background—Like Topsy, in Harriet Beecher Stowe's, "Uncle Tom's Cabin," the field of Health Education in New York City has "just growed." In the beginning, which goes back to the turn of the century, physical training and school medical inspection, formed the foundation of this field of modern secondary education.

In the early history of this phase of secondary education, the medical inspection of school children, out of which has grown our present program of school health service, was concerned almost exclusively with the detection of the signs of communicable diseases and the exclusion from school attendance of children presenting such signs.

After the inspection had been made, and as soon as the pupils had assembled and the school session had begun, the medical inspector departed to resume his private practice. He had little interest in, and assumed no responsibility for, the total health of school children.

The physical training phase of our health program, likewise stemmed from a humble source, and was dedicated to the thesis that the development of big, bulging muscles was synonymous with the development of physical health in the individual.

Health instruction as a subject area was, in these early days, non-existent. Some of the more impartant aspects of personal hygiene were contained in the physiology course. Since physiology was not one of the constants, or required subjects in the curriculum, very few high school students received any instruction whatever in health education.

The preceding brief historical statement is given for two purposes:

---

*Address given by Frank J. O'Brien, M.D., Ph.D., Associate Superintendent of Schools in Charge of the Division of Child Welfare, Board of Education, City of New York, at Annual Meeting of the American School Health Association, on Monday, October 6, 1947, at 9:30 A.M., at the Hotel Dennis, Atlantic City, N. J

First, that you may be encouraged by the noteworthy advances and achievements that have been accomplished during the past twenty-five years or more, and,

Secondly, that as we discuss our present status you will recognize that the task of developing an adequate and satisfactory high school Health Education Program, has been only partly accomplished.

Definition of Terms—In New York City, our Health and Physical Education Program in the High Schools includes the following three health areas:

1. Health instruction, which includes units of instruction in personal hygiene, home nursing, home and community hygiene, personality development, race hygiene, preparation for family living; safety education and accident prevention, first aid; care of emergency illness and accidents, and driver or car operator education.

2. Physical education, recreation, intramural athletic programs, and inter-school competitive athletics.

3. Health service and guidance, including an annual medical and dental examination and a systematic follow-up of pupils with remediable defects.

Development of Program—This rather elaborate subject matter area of Health Education, did not burst forth suddenly into full bloom upon the educational scene, but rather, has been the result of a long and slow evolutionary process. But unlike so many other subject areas today, Health Education has been developed out of the demonstrated needs of the children it seeks to serve, and not from irrelevant or impractical objectives that may emanate from arm chair philosophy, college requirements, blown up units of instruction, subject survival, or administrative expediency.

In 1917, the country was shocked to learn of the high percentage of its young manhood that was judged unfit for any phase of military service. The following year, the National Education Association published its now famous "Seven Cardinal Principles of Secondary Education" and placed health as the number one objective of education. Periodically since that time, educational authority has re-affirmed the importance of health as one of the cardinal goals, if not the principal goal, of secondary education.

Program Limitations—I wish to make it very clear, however, that this does not mean that we have reached all our goals or that we are complacently satisfied with our total Health Education Program in its present state, because we are not.

Medical Services—It is a far-cry from the early days of school medical inspection for signs of communicable and contagious diseases only, to our present school service program which seeks to provide for each child an annual medical examination by competent physicians, and a comprehensive program for the follow-up of remediable defects.

We endeavor to make the annual medical examination and program of follow-up an educational experience for the child and his family. We make every effort possible to impress upon parents the importance of health, and to elicit their cooperation in caring for the health needs of their children.

Carefully phrased correspondence forms are sent to parents to apprise them of the need and purpose of the annual medical examination. Later, a second form is used to inform them of the results of the examination and the part the family is expected to play in the program of correction, or special education, that is revealed by the medical examination.

In high schools where nurses are available, provisions for the correction of defects and periodic check-up are made jointly by the school nurse and the teacher of health education. The school health education teacher is responsible also for the development and maintenance of a group and an individual health guidance program, designed to help the pupil to maintain optimum health and wholesome adjustments to his home, school and community environment.

Each semester, the school nurse, where one is available, and the school health education teacher, jointly review health records of pupils in their care and make recommendations to the chief school administrator, for the special educational adjustments that are indicated by the medical examination, such as speech correction, sight conservation, health improvement, class placement and the like.

Dental Program—The annual dental examination, and correction of dental defects, is also an integral part of the health service program. The same emphasis is placed upon the educational values of regular dental examinations and follow-up, as is given to the medical examination.

In all cases wherein a child needs medical or dental care, it is the established policy of the school health services to recommend the pupil to his family physician or a private physician of his own choice. Only if the pupil's parents are unable, because of financial status, to pay for such services, does the Board of Education and the Department of Health secure treatment for the pupil through agencies.

A cumulative health envelope, designed to record the history of the child's health status and to contain within it all the available information relative to the health of the child has been developed and is currently in use. These health envelopes and records are transferred from school to school, as the child transfers, and finally are filed for a period of ten years after the pupil graduates or is discharged from school.

School Health Council—In each high school, there is a school health council that is made up of representatives of the school administration, Department of Health medical and nursing staffs, teachers, pupils, parents' groups and custodial staff whose function it is to plan and coordinate the total health program, in order to maintain a maximum healthful school environment.

Cooperative Enterprise—Our school health service program is a cooperative enterprise of the Board of Education and the Department of Health. The activities of the two organizations are formulated cooperatively, put into effect and controlled by policies that are enunciated by this Joint Coordinating Council, after they have been officially approved by the appropriate authorities of each agency.

Although progress has been made in improving our school health services, it is by no means entirely satisfactory, for it is not made available to all our high school students. Our paramount need, at present, is for more personnel to implement our program. We need many more physicians, dentists, dental hygienists, nurses and health education teachers, so that our schools can be fully staffed and the health service expanded to meet the needs of all the children. However, in order to secure the number of well trained and competent personnel that are necessary there must be provided, as an incentive to enter public service, adequate salary schedules, satisfactory working conditions and provisions for promotion and retirements.

"Post School Follow-Up"—Another direction in which we are ready to take "next steps" but are delayed from taking them by the lack of personnel, is toward a complete program of follow-up of all pupils, who leave school, or who have graduated. After they leave school many of these pupils still need a great deal of help through health guidance, and it is our opinion that the schools have a responsibility for them, beyond filing their cumulative health records for a period of ten years after their school days are over. A follow-up program of the children who graduate, or who leave school before graduation would provide the opportunity, not only

to be of more practical assistance to them, but also to ourselves, by obtaining very valuable information that would enable us to evaluate more realistically our total health program and learn what necessary modifications, extensions or changes in emphasis that should be made, in order to make it more effective.

However, this deficiency in our program is not peculiar to Health Education. It is characteristic of all education. Educators as a group have been entirely too satisfied always, to evaluate our effectivenes on the very limited basis of the marks obtained by students in the several subjects they take.

Are we to assume that good citizenship is synonymous with knowledge or vice versa? Should we not know from the history of mankind, as it has come down to us through the ages, that what determines an individual's worth, personally and socially, is not so much what he knows, or what skills he has acquired, but rather, *how* he uses them. For example, the inmates in our corrective institutions, and the patients in our hospitals for the mentally ill, bear irrefutable testimony to this very vital fact, which educators continue to be ignorant of, or to ignore.

Health Instruction—In the area of health instruction, we have also progressed steadily from the humble beginnings when it was only an adjunct to the elective subject, physiology.

Hygiene, as it is presently called, is a required subject for four terms, one hour a week. However, the hygiene course may be concentrated in two alternate or consecutive terms. This requirement coupled with the phases of health content that is given in civics, general science and biology is sufficient to satisfy the New York State Education Department requirement for one credit of health instruction as a prerequisite for graduation from high school. However, this meager one point credit required for high school graduation and obtained by an almost complete emasculation of the subject is considered by the State Department to be only a beginning or interim step toward a more adequate requirement in the future. I sincerely hope that the future action of the State Department will justify our acceptance of their statement concerning the present requirement.

Health Syllabi—We have developed tentative syllabi for health instruction on the unit plan. Stress is placed upon experimental learning rather than exclusively upon the acquisition of groups of facts. Pupils learn best when placed in situations which are meaningful to them, and which offer them challenging problems. Therefore, through health instruction we seek to develop effectively in

pupils an intelligent understanding of their own problems with a consequent sense of responsibility for their solution. Problems arising in connection with play, sleep, rest and nutrition; body functions and body changes concomitant with growth and development; the control of communicable diseases; community sanitation and community health resources; accident control and first aid; driver education and traffic conditions,—all present situations normally included in the pupil's own life, and provide our schools with an unusual opportunity to provide and utilize experiential health learnings, which, coupled with the educational experiences gained through the school health service and guidance program, should aid and equip the pupil to solve his own health problems.

Evaluation Necessary—Although we have been able to evaluate certain aspects of our program, there remains much more that must be done, if our entire health program is to be more completely measured in relationship to our own philosophy and objectives.

Before any significant progress can be made, however, in improving the health education program, the leaders in secondary education must come to an honest decision as to the value and importance of health. Certain questions must be answered specifically and sincerely, before it will be possible to plan and put into effect a health education program that reflects all the knowledge that is available to us and that is needed by our children. Do we, as educators, really believe in the importance of physical and mental health? Do we honestly accept that the total health of the child is the number one objective of modern education, as set forth by the National Education Association?

If we attempt to find the answers to these questions by an analysis of the amount of time and the number of trained teachers allocated to the subject, only one conclusion is possible, namely, that health is not important; that Health Education is not a major field in secondary education because, in most instances, it does not enjoy the prestige or position of a second class elective.

Until the time comes when the high school curriculum is predicated upon, and planned to meet the needs of all students, as part of their preparation for good citizenship, and not primarily or exclusively to meet the demands of college requirements or units of instruction, there will be continued resistance and insurmountable difficulty in the pathways of those of us who consider the teaching of health to be of paramount importance. It is to be borne in mind, in this connection, that the preparation of all our children for good citizenship does not and should not preclude the academic

training that is required by those who are preparing for college.

In the meantime, however, there are deficiencies in our present progrom that we in the health education field have a major responsibility to correct.

First, we must develop a core curriculum in Health Education in our high schools similar in purpose at least to the "Center of Interest Curriculum in Health" that we have developed for our elementary schools. All health instruction contributions of all other subject matter fields, no matter how small, should be correlated and brought into supplementary relationship with one another in order to avoid serious omissions, wasteful duplications, unnecessary repetition and to insure adequate coverage of each unit of instruction. A coordinator should be assigned by each high school principal on the basis of preparation, experience and interest to supervise the process of correlation, to coordinate the activities of the contributors to the core curriculum in health and then to supervise and direct the evaluation of the entire program. The Chairman of Health Education is the logical person in our high schools to be the coordinator.

Mental Health—In developing syllabi in health education or hygiene, health educators are doing little more than scratching the surface in dealing with the mental health of school children. It is true, I know, that most courses of study, include units of instruction in mental hygiene. As a matter of fact, the New York State Health Teaching Syllabus contains twenty lessons in mental hygiene on the junior high school level, and twenty lessons on the senior high school level, but in an already overcrowded curriculum the time now available to cover all units in the course of study is completely inadequate. Therefore, we are compelled to depend upon incidental teaching in mental hygiene, as individual cases of maladjustment are uncovered, usually as a result of a hehavior disorder, or because the child is a "dean's office case." This incidental treatment of such an important aspect of pupil health education as mental health, is indefensible. Our present program should be improved by the development of well organized units of instruction by the addition of many more trained teachers and by providing the time necessary for the effective presentation of these units. In addition, our teachers of health education should be given in-service courses in order to increase their competency in this phase of health.

Standards of achievement, and measurement of result must be developed also, in this aspect of our health program. This task

has already been started, but it must go forward without interruption, if progress in our health education program is to be made. Otherwise we will continue to deny ourselves the data that is indispensable for the adequate evaluation of our program and to learn where and how health education may be improved on the basis of its effect and influence on the lives of children, not only while they are with us but afterwards, when they are no longer under our supervision.

Cooperation of Colleges Necessary—If health is truly one of the principal objectives of college education, our next step towards the establishment of health instruction in its rightful place in the high school curriculum, is to convince the individual colleges and the several sectional Associations of Colleges and Secondary Schools, that the successful completion of at least three units of Health Education on the high school level, should be required for admission to college. Since college entrance requirements affect so materially the general character of the present secondary school curriculum, and unfortunately, will continue to do so for a long time to come, such a requirement on the part of the colleges, although it would not solve our entire problem, it would help immeasurably to make it possible for each high school student to acquire the health attitudes, knowledge and practices that he has a right to have, and must have, if he is to preserve his own physical and mental health, and be able to contribute to the maintenance, betterment and security of our American Way of Life.

Physical Education—The purely muscle-building aspects of the physical education phase of the Health Education Program of the past are now subordinated to more practical and diversified aims and objectives. The building of organic power and the development of fine neuromuscular coordinations, of course, still play an important role in the physical education course. But the development of leisure-time activities, the emphasis on qualities of leadership, the evolution of acceptable conduct patterns in activity situations, and the development of socially desirable attitudes and habit patterns have replaced the purely big-muscle activity and the turtle-necked sweater of an earlier era.

Program Handicap—As encouraging as the advancements have been, there are still aspects in our physical education program that should be critically evaluated. For example, classes are too large and consequently the maximum effectiveness of the program cannot be attained. The correction of this condition requires more trained personnel, more time allowance and, in some schools, bet-

ter physical facilities. As stated in connection with our discussions of medical services and health teaching, these program developments depend ultimately on increased budget allowance. On the other hand, if we are to expect our children to receive the best in physical education, teachers must be provided with all the conditions and facilities that are necessary to permit them to do effective teaching. This requires that the pupil-teacher ratios must be lowered to 50 to 1, and the ratio for classes for physically handicapped children should not exceed 25 to 1.

Although the physical facilities in our modern high schools are excellent, those in our older school buildings should be modernized. It is necessary that vigilance be exercised constantly, lest factors such as the high cost of building construction or the prestige of other subjects that enjoy greater academic loyalty and protection result either in the curtailment or the elimination of the required staff and physical facilities that are necessary to carry on an effective physical education program.

Swimming—The importance of swimming, both as a recreative and as a survival activity is recognized, and an extensive program of swimming instruction is provided in all high schools having pools, and through the use of neighborhood facilities for schools that lack this facility.

Swimming as Therapy—We are interested also in the therapeutic value of swimming for orthopedically handicapped pupils and an experimental program has been organized for them. Even during the short time this program has been running the results obtained, not only in the physical condition of these children but in wholesome personality changes, are most encouraging. The marked personality improvement that has taken place in the children who participate has been recognized and commented upon by their parents, classroom teachers, principals, as well as by the teachers of swimming.

Conclusion—It has been my purpose in this discussion to stand in the middle of an era and, by looking backward at the beginning and comparing it with the present, gauge our progress in Health Education. Then, on the basis of our present program, I have sought to look into the future to determine what our next steps should be. These next steps are the most important to us now as they represent the pathways of progress we must travel in the days that lie ahead if we are to be worthy of our trust. Our journey into this is not fully chartered. Our endeavors of tomorrow must be characterized by vision, honesty of purpose, industry and cour-

age; by constant re-evaluation of our functions, programs and results; and by constantly revising our policies and practices on the basis of our past experiences and newly gained knowledge.

Our children have a birthright to possess in the highest degree,—moral, physical, mental and social health—and they are deserving of nothing less. Let it be said that we did not fail them.

* * * * *

Slow Heart Rate After Exercise,—To the Editor:—What interpretation should be placed on the lack of rapid heart action after a period of exercise? To be specific: I have on several occasions observed that apparently healthy young men (U. S. Navy applicants) may show an initial pulse rate of 80 per minute, and after a standardized exercise test their pulse may be only 88 per minute, whereas the average man's would be 110 to 120 per minute. What conclusion should be drawn from prolonged rapid heart action following exercise? What conclusion should be drawn from drop in pulse rate and/or blood pressure following exercise? E. J. Sullivan, Jr., Lieutenant (jg) M. C., U.S.N.R.

Answer.—The failure of the heart rate to be much elevated after exercise is in most instances in young people a favorable sign of physical fitness and athletic training. The same is true of the rapid reduction of pulse rate on resting during the first two minutes after exercise. The maintenance of prolonged rapid heart action after exercise can be the result of overstrain of an abnormal heart, but it is more commonly the result of poor physical condition or of nervousness. In rare cases heart block may be responsible for a drop in pulse rate immediately after exercise. In such cases electrocardiographic study should be made. However, in certain athletes the sudden development of sinoauricular block with the halving of the pulse rate or close to it can occur within a minute after some exercise, such as a hundred yard dash, and in such cases is a favorable and economical physiologic mechanism.

The effect of exercise on the blood pressure may be quite similar to the effect on heart rate, but these effects often are not parallel; if the heart is weak or a state of collapse is produced the blood pressure may fall abruptly. Journ. A.M.A., August 16, 1947, p. 1445.

THE SCHOOL HEALTH EXAMINATION*

CHARLES C. WILSON, M.D.
Professor of Education and Public Health—Yale University

The school health examination has become so symbolic of health services to school children that many communities say they provide school health services when all they provide is a health examination. School health examinations are important, but they are not ends in themselves. They are solely one means of appraising the health of school children. If we are to improve the health of school children we must recognize this significant fact and consider the health examination in its relationships to other types of activities.

Our starting point will be a consideration of the purposes of school health services. This will be followed by suggestions for improving programs as they generally are conducted.

Purposes of Health Examinations

It is surprising that one rarely sees in reports of school health programs or in books on public health and education a clear-cut statement of the purposes of health examinations. Perhaps this is because it is considered that their purposes are obvious. Or it may be that the procedures have become so routine that no one has taken the time to question what they are expected to accomplish. This fuzziness in defining purposes frequently leads to the assumption that the sole purpose of health examinations is to "find defects", and at times we find personnel that seem to glory in finding defects, even though nothing is done about them.

As we think about health examinations we can list at least five purposes that they should achieve:

(1) *They should provide teachers with information concerning the growth and health status of each pupil.* More and more teachers are considering each of their pupils as an individual with a unique personality and pattern of growth. They are considering education as a force favoring growth and development. Furthermore, as they develop the philosophy of teaching children rather than subjects, they realize that their first responsibility is to know each pupil,—to know all they can about each pupil. The health examination should give the teacher information that helps her to understand each of her charges.

(2) *Health examinations should identify pupils who need*

*Presented at the New England Health Institute, Durham, New Hampshire, June 17, 1947.

further examination. The school health examination can not be used as a means of diagnosing all conditions, for it frequently is impossible to include many types of special tests and laboratory procedures. But the school examination may reveal conditions that indicate need for an x-ray, special heart examination, blood examination, or other diagnostic measure. The school medical advisor should recommend such further study and examination whenever he thinks it will serve the best interests of a pupil.

(3) *Health examinations should identify pupils who need treatment.* The examination may reveal that a pupil is in need of medical or surgical care, or it may reveal that improved home care is necessary. This purpose is quite obvious.

(4) *Health examinations should identify pupils whose school programs need to be modified.* The examination should identify those who need lip-reading, speech correction, limited physical activity, sight-saving procedures, etc. Health examinations are the basis for adapting school programs to the needs and capacities of handicapped children.

(5) *Health examinations should be vital, constructive educational experiences for the pupils.* Over the years those who work with school children have become increasingly aware of the educational significance of the contacts of a physician or nurse with pupils. Whether we will it or not, pupils will develop attitudes toward physicians, toward health examinations, and toward the total school health program. The kind of attitudes they develop depends in part on such factors as the environment in which the examination is conducted, the manner in which it is made, and the personality of the physician. It is our task to so regulate these factors that the educational outcome will be desirable and constructive. We cannot continue to examine children in makeshift quarters and have physicians talk in a gruff manner and act hurried and bored, if we want to secure the best educational results.

If these broad purposes of health examinations are accepted, then we need to consider how we can change usual procedure so as to more surely attain these goals. If what is being done in a particular community effectively achieves the purposes desired, no change is necessary. I would like, however, to suggest ways by which many school health programs can be improved. This will involve consideration of methods to:

(1) supplement medical examinations with a variety of other health appraisal procedures
(2) consider the quality of medical examinations as more important than the quantity

(3) provide adequate health counseling service
(4) coordinate counseling and treatment programs
(5) evaluate results in terms of objectives.

Let me say a few words about each of these suggestions.

Supplement medical examinations with a variety of other health appraisal procedures. In addition to a medical examination, the health appraisal of a pupil requires that use be made of (a) a health history, (b) selected screening tests, (c) teachers observations, and (d) sometimes psychological tests. Only through using such a battery of procedures can a reasonably complete health appraisal be achieved.

The health history may reveal a number of conditions which would not, or could not, be detected by medical examination. It may tell us that there is tuberculosis in the family, that a pupil has had a severe attack of rheumatic fever, that he suffers from an allergy, that he is diabetic, or that he suffers from frequent and severe colds and tonsillitis. This information is needed by the physician.

Screening tests for vision and hearing can be conducted effectively and dependably by teachers who have been instructed in the techniques of the tests, by nurses, or by teachers and nurses working together. Similarly, information about growth can be obtained by measurements of height and weight. These procedures do not require medical skill, but the procedures used should be developed cooperatively by the school medical adviser, nurse, and school administrator.

The important role of teachers' observations in the health appraisal program has been emphasized by the Astoria school health studies and reported by Nyswander in "Solving School Health Problems". To be fully effective, teachers need preparation for these functions, either in their pre-service education or as part of an in-service program. Furthermore, there needs to be developed in each community a plan for teachers to record their observations and to transmit them to the nurse or physician.

For the correct interpretation of certain mental and emotional problems, the physician may at times need the results of psychological tests or psychiatric examinations. School physicians should work closely with school administrators, school psychologists and others concerned with the protection and improvement of mental health.

Supplementing medical examinations with these other means of appraising the health status and the health needs of pupils will

enable us to develop better health service programs.

(2) *Consider the quality of medical examinations as more important than quantity.* For entirely too long we have been possessed of the idea that if we could just examine every child every year we would greatly improve the health of children. The fallacy of this concept lies first in the fact that in most communities such frequent examinations can be made only by sacrificing quality and substituting a superficial inspection for an examination, and second in that the examination itself does not improve health, it only provides information that can and should be used to see that health is improved.

The type of examination that is desired is well-described in the report "Suggested School Health Policies", in these words: "Medical examinations should be sufficiently painstaking and comprehensive to command medical respect, sufficiently informative to guide school personnel in the proper counseling of the student, and sufficiently personalized to form a desirable educational experience."

Less frequent examinations of this type are more valuable than superficial annual examinations. In the same report it is suggested that, "During their school years students should have a minimum of four medical examinations; one at the time of entrance to school, one in the intermediate grades, one at the beginning of adolescence and one before leaving school."

(3) *Provide adequate health counseling services.* Regardless of the frequency or quality of examinations or of the variety of procedures used in appraising the condition of pupils, the best possible results cannot be attained unless some person is given responsibility for health counseling, and has adequate time to spend on this important phase of health service. Written notices to parents concerning conditions found and requiring attention bring limited results because of their impersonal nature, their lack of motivating power, and their inability to give parents the information they desire. Written notices need to be augmented by personal conferences with students and their parents—a procedure which we describe as counseling. Counseling provides parents with opportunities to secure information and it helps parents to plan a program of action. Counseling is the step between finding a condition that needs attention and securing that attention.

In many schools the nurse acts as the counselor. She interprets the physicians' findings, and the findings of other appraisal procedures, to the parent and the student. She informs them of

community resources for treatment. In many schools, teachers and nurses work cooperatively in counseling procedures.

The word counseling has certain specific connotations. It is not telling a parent or child what to do, but is a method of helping them decide what to do and how to do it. Emphasis is on helping parents and students to help themselves.

Coordinate counseling with treatment programs. Counseling cannot be fully effective unless there are adequate treatment facilities in the community. Most children will secure needed medical and dental treatment from private physicians and dentists, but there are those whose parents cannot afford such services. For these the community must develop some form of medical care. Those concerned with school health programs must familiarize community groups with the unmet health needs of children and encourage the establishment of a program that provides adequate care for the needy. Unless this is done, health appraisal procedures may result in little more than a series of notations on a card.

In addition to facilities for medical and dental care, there must be provisions for the special types of educational programs needed by certain handicapped pupils. Those concerned with health counseling must see that, where necessary, speech correction, lip-reading and other special services are available. They must see that a helpful program is provided for the mentally handicapped.

The health counselor will also be concerned with the adequacy of children's meals and with the home care they receive. Their visits to parents will be of an educational nature. They will help parents to understand their children and to recognize and appreciate the need for essential nutrients, adequate sleep and rest, and healthful recreation.

Evaluate results in terms of objectives. I will conclude these comments on the school health examination with a few remarks on the evaluation of the program. What results do we attain? When this question is raised in many communities the answer which is given is either a statement of the number of children examined or the number of defects that were found. Such answers indicate that the purpose of the program is either to examine children or to find out how many defects exist. Of course, these are not real purposes; they are just intermediate steps in a program to improve the health of children.

The inadequacy of reports that show the real results of school health programs makes it impossible to tell what is being accomplished by the money spent for school health services. We know

that much is being done, but we find difficulty in securing evidence to prove it.

This problem could be solved partly by reports that indicate the degree to which a school health program has achieved its stated purposes. Instead of reports that give only figures showing the number of children examined and the defects found, we should prepare reports showing the number of children for whom medical or dental care was obtained, the number for whom special educational provisions were made, the number for whom more or better food was secured, or the number for whom vaccination or diphtheria immunization was provided.

Our evaluation should provide answers to other questions. Have we helped teachers to understand their pupils? Have health appraisal and counseling procedures contributed as much as possible to the health education of children? Let us evaluate our results by determining to what degree we have accomplished what we set out to do.

In conclusion, let me emphasize that school health examinations have contributed much to the health improvement of children. At the same time let me also emphasize that much more can be done. I have offered certain suggestions for improvements and I am sure that many of you can offer equally valuable suggestions. I hope that at some of our future meetings we can give further consideration to the school health examination and to the total program of which it is but a part.

* * * * *

Hearing Consultants Available,—The Michigan Department of Health is again offering the services of two hearing consultants to Michigan schools in continuation of the hearing program begun in January 1943. More than thirty counties have already requested the services of the consultants. Each child with a hearing loss detected by tests using an audiometer is taken to a hearing specialist for examination and medical care. Since the program began, group hearing tests have been given to 214,290 children in forty-three counties in the state. Of these, 3 per cent showed some loss of hearing. Of those who received medical treatment, 75 per cent improved, about 50 per cent to normal hearing. Requests for the hearing conservation program are made through local departments. Journ. A.M.A., Sept. 27, 1947, p. 236.

AIDS TO THE DIAGNOSIS OF INADEQUATE NUTRITION*

HERBERT POLLACK, M.D.
Associate Physician, Mt. Sinai Hospital, New York

From a metabolic and nutritional point of view, the school child and adolescent represents a particular and specific group of the general population.

It is during the period of life that the major physical and emotional development takes place. The nutritional requirements during this period, for each pound of body weight, are greater than after adulthood has been reached. Nutritional requirements are based upon metabolic demands. This leads to the obvious conclusion that the adolescent and school child has a particular need for good nutrition. These conclusions were borne out by practical experiences. Large numbers of the German army were captured during the last war. A high percentage of these captured soldiers were teen aged boys. Malnutrition was frequently seen in this group when they were allowed only the same subsistence as the adults. Further evidence of the susceptibility of this age group to malnutrition was seen in the surveys of poplation groups in liberated areas. Infants were usually well cared for. The mature, healthy adult was generally in good condition. The school age and teen age children however, would show retarded physical development.

There are many reasons leading up to an inadequate nutrition. A prime one is the economic factor or inability to purchase adequate food. Ignorance of what constitutes an adequate diet is perhaps an even more important reason. Educational campaigns must be directed against this remediable defect. Amongst other reasons commonly encountered are "finicky eating habits" and food faddists. Interference with normal digestion and absorption such as is seen in chronic diarrheas will lead to malnutrition. The mere presence of obesity or overweight does not preclude the presence of nutritional disturbances, and may even lead to them. Overindulgence in one type of food puts metabolic demands on the body which may precipitate certain vitamin deficiency syndromes.

An adequate nutritional intake is the basic essential. This discussion will not go into the details of a good diet as much has been written already. It is the responsibility of the school health authorities to detect evidences of malnutrition as early as possible

*Abstract by the author of paper presented before the New York State Association of School Physicians and New York State School Nurse Teachers' Association, Saratoga Springs, New York, July 28, 1947.

and refer the child to the proper medical authorities for definitive treatment.

The signs of malnutrition in the school child are usually more clear cut than in the adult. These signs, it should be remembered, are only what are called indicators. They are presumptive evidence and not proof positive. A further complete physical examination is necessary.

The height and weight of the individual as compared to the standard for age and sex and race is a simple index which tells a great deal. The rate of change of the height and weight is even a better index of the general nutrition of the individual. One cannot compare the height of a Puerto Rican, however, with an Anglo Saxon as standards differ.

The skin and hair tell a great deal about an individual's nutritional status. Dry stringing hair is frequently seen in poor nutrition. The skin may show a follicular hyperkeratosis or perifolliculosis. That is, the hair follicles become pigmented, hard on the calfs, thighs and arms. The skin feels like sand paper. The hairs may be broken and short. These changes are usually attributed to a vitamin A deficiency. The B complex deficiencies, especially that of nicotinic acid or niacin, are clearly evident on the skin. These manifestations are a dermatitis over the wrists, ankles, and neck. It may be a simple reddening or permanent blush to start. Eventually these areas pigment and get very dark. Pigmentation around the eyes and on the forehead in underweight people is frequently seen. Black and blue spots, an eccymosis occurring frequently and with minimal trauma should always be investigated. They may represent vitamin C or vitamin K deficiencies.

The eyes are subject to visible changes from nutritional inadequacies. Photophobia, lacrymation, itching, diffuse redness, are not uncommonly seen when specific nutrients are lacking in the diet. Night blindness may be due to a vitamin A deficiency as well as to other causes.

The lips and tongue can tell the story of nutritional intake without words. Chapping of the lips, especially when associated with sores or redness in the corners of the mouth, are very significant findings. They may indicate a vitamin G deficiency. The beefy, red sore tongue or the scarlet red tongue are present in niacin deficiency syndromes.

Carious teeth, bleeding and swollen gums are subject to considerable discussion. Their presence however should call for a complete thorough investigation for a possible nutritional basis in any individual.

The bony changes of rickets are well known and point towards an inadequate intake of vitamin D and calcium. The physician who has interested himself in this field is familiar with many more signs and symptoms. Special techniques and training are required to elicit them.

The more chronic signs of the inadequacies are difficult to interpret and require a good deal of clinical experience and judgment. These are more insidious in their development than many of the acute or florid signs previously described. An individual may be suffering from low grade or border line inadequate nutrition and still not show clinical manifestation for a long period of time. When, however, the demands are made upon the body reserves as during an acute infection, then the outcome may be decided by the presence or absence of good tissue nutrition.

* * * * *

Diphtheria,—Twenty upstate New York communities have at least 70 per cent of their children under five years of age immunized against diphtheria according to records on file in the State Department of Health as of July 16, 1947.

The rise in diphtheria morbidity which began in 1945 continued through 1946. While the number of cases reported upstate from January 1 through July 31 of the present year (113) is lower than the total for the first seven months of 1946 (228), it is considerably higher than the totals for the corresponding periods of a number of the immediately preceding years.

Artificial immunization of a higher proportion of preschool children—at least 70 per cent—and reimmunization on entrance to school are essential to the maintenance of adequate community protection against diphtheria. Initial immunization should be given at six months of age and consist in each instance of a complete course of two doses of alum precipitated toxoid. All children should receive a booster dose of 1 ml. alum precipitated toxoid when they enter school for the first time. In areas of increased diphtheria prevalence, inoculation or reinoculation of all children through high school age who have not been so treated within the immediately preceding three years is recommended. Older children and adults should be inoculated with caution and preferably only after Schick testing.

Diphtheria antitoxin should be administered immediately in all suspected cases of the disease without attempting therapeutic tests with other agents or awaiting the results of bacterial examination of nose and throat cultures. Health News, Sept. 1, 1947, p. 147.

SECOND REPORT ON SCHOOL NURSING POLICIES AND PRACTICES TO THE COUNCIL OF THE AMERICAN SCHOOL HEALTH ASSOCIATION

By council action at Cleveland in 1946, the committee on School Nursing Policies and Practices was continued for another two years and permission granted to enlarge the committee to include representation from more states.

In March, 1947, the committee members sent out a questionnaire to representatives in ten different states. Reports were received from thirty-four school nurses, which is not a large representation, but since the questions are not entirely personal, the material is of significance.

Some of the significant findings tell us that five states have no legal requirements for school nursing beyond being a registered nurse. In three of these states the State Department of Health has set up recommendations of minimum standards. In five states there are legal requirements for school nursing. Three of these states have requirements set by the State Department of Education. In two of the states the requirements are set by the Department of Health. In the three states in which the Department of Education has set the standards, there is considerable similarity, including an adequate requirement for education courses. However, there is a marked difference between the requirements and recommndations of the ten states surveyed.

Two of the ten states have no colleges which offer specific training in public health or advanced work for nurses in any field.

The nurses offering this information feel that they would like more courses giving information about specific problems, such as, communicable disease control, mental hygiene and child growth and development. There is also a decided lack in professional courses in education which would be of any great value to nurses in the schools.

The chairman's generalization from the report of these thirty-four nurses probably should read like this:

1. There is a decided lack of any national standards for the preparation of nurses serving in the school. Leadership on the national, and, in all but three cases, on the state basis is not present. It would seem that there is need for a recommendation from the American School Health Association that either the State Department of Education should have a school nursing supervisor or the State Department of Health should have a consultant in school

nursing in each of the states in which school nurses are employed.

2. Some recommendations for standards should be set for the licensing of nurses who serve in school positions, and preparation for this licensing should be offered in either colleges offering an approved course in public health nursing or colleges offering courses in education.
3. Possibly a recommendation from the Council of the American School Health Association stating that adequate compensation should be offered to attract real leaders as school nursing supervisors or consultants would be helpful. Just how this recommendation could be circulated to be effective would need to be decided by the council.

By GERTRUDE E. CROMWELL, *Chairman.*

* * * * *

The Immunization of Young Children Against Diphtheria,— In 1941 the Ministry of Health (England) launched a national campaign to immunize children against diphtheria before their first birthday. The slogan is: "Diphtheria costs lives—Immunization costs nothing". The result has been a remarkable progressive fall in the number of cases and the number of deaths. Prewar figures averaged 58,000 cases and 2,800 deaths annually. In 1941 these figures had fallen to 50,797 and 2,641. In the following years the fall has steadily continued, until in 1946 the figures were only 18,284 and 472. The figures mean that for every six children who died from diphtheria before the war only one died in 1946 and that the number of cases had fallen by 40,000. Last year half a million children under 5 years of age were immunized. The aim this year is to immunize 590,000 babies before their first birthday. It is believed that such a high level of immunization has been achieved among children that diphtheria could be eliminated as an epidemic disease if in each year 3 of every 4 babies were protected before reaching their first birthday. The total number of children immunized since the campaign began is more than 6,600,000. London Letter, Journ. A.M.A., Oct. 11, 1947, p. 371

* * * * *

Diphtheria,—The first case of diphtheria in North Tonawanda (a suburb of Buffalo, N. Y.) since 1938 was confirmed to Dr. Harry C. Beatty, Health Officer, recently, with the return of a positive report on a culture submitted to the State Department Laboratory at Albany. North Tonawanda has a population of 15,000. *North Tonawanda News*, North Tonawanda, N. Y.

EDITORIAL STAFF

CHARLES H. KEENE, M.D., *Editor*
University of Buffalo, Buffalo, N. Y.

GERTRUDE E. CROMWELL, R.N., *Assistant Editor*
Des Moines, Iowa

EDITORIAL BOARD

WILLIAM E. AYLING, M.D.
Director of School Health
Service, Syracuse, N. Y.

HELEN A. MARTIKAINEN
Health Education Consultant
U. S. Public Health Service
Richmond, Va.

S. B. MCPHEETERS, M.D.
Director, Public Health
Wayne County Health Dept.
Goldsboro, N. C.

J. A. MYERS, M.D.
University of Minnesota
Minneapolis, Minn.

FREDERICK L. PATRY, M.D.
Psychiatrist
Formerly State Dept. of Education
Albany, N. Y.

C. MORLEY SELLERY, M.D.
Director, Health Service Section,
Public Schools, Los Angeles, Calif.

CLAIR E. TURNER, DR. P.H.
Assistant to President, National
Foundation for Infantile Paralysis,
New York, N. Y.

EDITORIAL

We are approaching—in fact already are in—an era of great educational possibilities. We shall go on to a better, happier, and more peaceful time, or we shall have a debacle the like of which the world perhaps never has experienced.

In the long period, civilization will live or die because of what the educational system does or fails to do. The schools must remain in the control of the people whose children attend them. That means local control or at most state direction. Whenever a dictator has aspirations to rise or to dictate, one of his earliest efforts is to get control of the education of the people, particularly of the youth —the schools. That is why so many feel that federal control of education should be vigorously opposed.

Schools, colleges and universities are crowded with eager groups. In the colleges and universities, the groups are made up mostly of veterans returned from the armed services. We find these men and women receptive to new ideas. Their experiences have broadened their outlook.

Never before has an opportunity such as the present one been presented in the field of School Health. It is the duty, as well as the opportunity, of the school health workers to sell the health program to these eager young adults, who within a very short time will—so far as is concerned any factor in our lives in which they

are deeply interested—control our community opportunities and activities.

For the broadening and establishment of better school health services, better physical and recreational opportunities and programs, and more broad and intensive health education, publicity is the foundation. Salesmanship of what is possible for better health and more vigorous health efforts, disclosure of what we are now doing, discussion of what we should be doing is the first and continuing need.

Publicity is the breath of life to any health program, particularly to the school health program. A huge proportion of our school health directors and administrators and workers, and of our health educators "miss the boat" when it comes to publicity. They have a story to tell that has enormous punch and interest if it be presented to those most concerned, pupils, parents, teachers, Boards of Education. The general public also is greatly involved. They have been school children, many are parents of adult children, they are voters, business and professional men in the community, and some govern and control city finances. We have a fascinating story to tell but fail to tell it.

Here is no place for "blushing modesty", maidenly or otherwise. Shout from the house tops. Let people know what health efforts are going on in the schools, what the success has been, what you hope to do. But—be sure of your facts.

The media are numerous, at hand, and eager to receive—if it is "news". Local and away from home meetings, especially meetings of parents, and of teachers, physicians and administrators. The daily newspapers, in rural areas the weekly newspapers, professional journals and national publications, are eager for accounts of events—both those just passed and those to come.

Not the least of our opportunities rest on reports, to the Superintendent, to Board of Education, to local groups such as the "service clubs" i.e., Kiwanis, Lions, professional societies and associations.

You are salesmen—salesmen of health, and of child and community welfare. Think out a program and a procedure. Have something to sell. Get your foot in the door and sell it.

Many of us are skilled in the techniques and in administration in our field but "dubs" in selling. Don't be a dub.—*C.H.K.*

Remember: "The wheel that squeaks the loudest gets the most grease."

ABSTRACTS AND NOTES

Tuberculosis.—The excellent article entitled "Tuberculosis" by J. D. Wassersug, published in the July 3, 1947, issue of *The New England Journal of Medicine* deserves comment.* Attention is called to the fact that some individuals lose their sensitivity to tuberculin, presumably after all tubercle bacilli have died in their bodies. How frequently this occurs is not known, as no group of individuals has yet been observed sufficiently long. Thus the old dictum, "once infected, always infected", is not necessarily true in all cases.

The relationship of sensitivity to tuberculin to prognosis is discussed with reference to the work of Edwards and Hardy, who found a higher percentage of deaths among children who reacted to a small dose of tuberculin than those who reacted only to a larger dose.

Sanatorium treatment of children with primary tuberculosis apparently has no effect on the development of progressive disease in later life. This has also been found true of primary tuberculosis when it develops in adults. However, a controversial note is struck in the statement that mass examination of children in grade schools should be abandoned. There are those in this country whose experience has firmly convinced them that at least tuberculin testing of those in pre-school, grade school and high school ages, is one of the most important phases of the tuberculosis eradication program. Every child who reacts to tuberculin has had contact with a contagious case of tuberculosis which often can be found, if sought with adequate diligence. Moreover, every child reactor is a potential case of clinical tuberculosis in adult life unless all tubercle bacilli die out and he is converted to a nonreactor. Indeed, every reactor has lesions whose tubercle bacilli may be responsible for clinical tuberculosis at any time. Wherever the tuberculin test has been used properly among the children and young adults over a long period of time, together with other phases of a control program, the greatest accomplishments have been achieved as manifested by decreases in infection attack rate, morbidity and mortality. In fact, Jordan has reported that by the use of this method tuberculosis has been eradicated at the school age level in 219 of the 277 schools in his four-county senatorium district.

Dr. Wassersug presents a most logical discussion of the value and limitation of x-ray inspection in diagnosis. He says: "Chest roentgenology has not advanced to the point where it can be substituted for logic or reasoning. Diagnosis is a function of logic,

*Abstracted and discussed by Jay A. Myers, M.D., Minneapolis, Minn.

and the diagnosis of chest diseases, especially tuberculosis, depends on the correlation of clinical, roentgenologic and bacteriologic studies. No x-ray machine can do this. The diagnosis of tuberculosis or its degree of activity should never be based wholly on the x-ray report of the chest findings. 'Never put your complete trust in shadows' is a sound medical adage that applies especially to tuberculosis." Again, he says: "All the roentgenologist can and should do is to describe the type of shadows cast on the film, since shadows identical with those of tuberculosis may be cast by many diseases. Diagnosis should rest with the clinician, not the roentgenologist." He says further: "Probably the most notable advance in the past year lies in the growing awareness of the fallibility of the x-ray machine and its limitations in the diagnosis of tuberculosis."

The author laments the fact that so little opportunity is afforded the general practitioner to diagnose and treat tuberculosis. Training in tuberculosis often is inadequate to the intern and resident physician—the future practitioner. He makes a plea for the study of noncontagious cases at home or in local hospitals, where the physician's interest and participation can be resumed and retained.

An excellent discusion of antibiotics and chemotherapy in the treatment of tuberculosis is presented. There is now a tremendous volume of work in progress, particularly with streptomycin. Its values and limitations are being studied with care, and within six to twelve months we should know its immediate effect on various forms of tuberculosis. In the meantime, not enough information is available to draw any final conclusion. The remote effect of streptomycin on tuberculosis will not be known for several years.

Under "Immunization", the author prudently refers to BCG as a 'possible' immunizing agent. He calls attention to the report of Ferguson pertaining to the use of BCG among students of nursing and cites the statement that BCG vaccination reduced manifest tuberculosis among negative reactors by three fourths. However, attention must be called to the possible diagnostic errors, inasmuch as many of the diagnoses hinged on x-ray shadows. Attention should also be called to the fact that the rates for tuberculosis among these BCG inoculated people are still much higher than the ordinary normal incidence of disease in the general population of New York City. This would indicate that the institutions on which Ferguson reported harbor so many cases of contagious tuberculosis without affording protection to the students that the crying need is to find these cases and prevent them from disseminating tubercle bacilli. In the Minneapolis General Hospital a strict contagious

disease technique has been developed which is exceedingly effective in protecting student nurses against infection with tubercle bacilli. Attention should also be called to the fact that at the University of Minnesota tuberculosis among students of medicine has been controlled to such a degree without BCG that no institution in the world that has used it even remotely approaches the accomplishment. In fact, in one school of nursing and one school of medicine there has been but one student in each, in whom demonstrable tuberculosis lesions have developed in the past five years.

The work on BCG in Denmark is also discussed. Probably attention should be called to a paper published by Birkhaug in 1947, entitled, "BCG Vaccination in Scandinavia—Twenty Years of Uninterrupted Vaccination Against Tuberculosis," in which he states that in 1944 the death rate in Scandinavia, including Denmark, Norway and Sweden, was 70 per 100,000 population. The same year in the United States, where some of the greatest centers of congested population in the world exist and where many million Negroes, Mexicans and others with high tuberculosis mortality rates reside, the mortality was only 41, which is 41 per cent below the Scandinavian rate. The mortality rate in New York City that year was 52, which is 25 per cent less than the Scandinavian rate. In Minnesota, with a population almost as large as that of Norway, the mortality rate was 27.6 in 1944 and 24.9 in 1945, and several counties had rates less than 10 per 100,000. Obviously, therefore, far more has been accomplished in tuberculosis control in this country without BCG than in any country of the world, including those of Scandinavia, where it has been used. Moreover, Levine's work in New York City revealed no significant difference in the incidence of clinical tuberculosis between the so-called vaccinated and the unvaccinated groups.

The author says: "It is perhaps not widely enough realized that ambulatory pneumothorax may be used as a valuable adjunct to other measures for the control of pulmonary tuberculosis." This form of treatment is becoming more applicable to larger numbers of people as we approach clinical tuberculosis nearer its beginning. By the use of the tuberculin test, periodic chest x-ray film inspection of the adult reactors and complete examination when shadows appear to determine the etiology of the disease causing them, we are now in a position to detect the majority of the lesions of chronic pulmonary tuberculosis in the pre-symptom and pre-contagious stage and before they have resulted in extensive destruction of tissues. Ambulatory artificial pneumothorax adequately controls a high percentage of such lesions. From *New England Journal of Medicine*, July 3, 1947.

Membership,—Below, appears part of the Secretary-Treasurer's report* for September, 1946, to September, 1947, on the number of new members grouped by states, and on the number of new subscribers grouped by profession. The table on new members is particularly interesting for several reasons. It shows the total number of new members and one can note the leading states, the position of one's own state, and the depressing fact that some states show no new members for the year. The relative numerical position of the states would be changed considerably if we reduce the figures to a more scientific basis—the increase per 100,000 population.

New Members by States:†

Alabama	3	Minnesota	6	Utah	1
Arizona	3	Mississippi	6	Vermont	3
Arkansas	0	Missouri	16	Virginia	5
California	58	Montana	0	Washington	3
Colorado	23	Nebraska	0	Washington, D. C.	0
Connecticut	4	Nevada	0	West Virginia	16
Delaware	0	New Hampshire	1	Wisconsin	6
Florida	19	New Jersey	17	Wyoming	1
Georgia	4	New York	25		
Idaho	0	North Carolina	1	Alaska	1
Illinois	18	North Dakota	0	Bermuda	1
Indiana	9	Ohio	14	Canada	2
Iowa	5	Oklahoma	0	China	2
Kansas	3	Oregon	1	Czechoslovakia	1
Kentucky	2	Pennsylvania	27	England	1
Louisiana	3	Rhode Island	2	Hawaii	1
Maine	2	South Carolina	1	Holland	1
Maryland	1	South Dakota	1	India	2
Massachusetts	15	Tennessee	4	Palestine	3
Michigan	46	Texas	2	Russia	1
				Total	371

New Subscriptions (In addition to new members).

Doctor	1	Educational Agencies	31
Nurses	7	Health Departments	52
Health Educators	15	Tuberculosis Associations	2
Libraries	30		
		Total	132

Each of us should try to push our state nearer the top. One state group of delegates on the Governing Council has already threatened to "go after" the leader.

The listing of new subscriptions by profession and groups shows definitely an encouraging condition from the point of view of spreading the School Health Gospel.

Health Departments stand well in the lead, with Educational agencies and Libraries following with a gratifying increase.

*American School Health Association.

†If we add new subscriptions the record of some states would be greatly improved—for instance—Maine.

The Physician and the School,—Each year thousands of physicians serve our schools in varying capacities. In many communities they serve only as part-time medical inspectors who give medical examination to children entering school in the fall without medical examination by the family physician. In other communities the physicians are specially trained in school health service and are employed as full-time school medical advisors to work with pupils, teachers and administrators in carrying out a planned program of educational and preventive medical services and health guidance throughout the year. In other less fortunate communities little if any physician's service is provided in the school; only in epidemics of measles, scarlet fever, food-poisoning or ringworm of the scalp is the local health officer called for help and advice.

Certain questions continually recur: is the time of the physician in the school most profitably spent in routine medical inspections; should physicians continue to cooperate in school medical inspection plans that fall far short of meeting minimal medical standards; is the Astoria plan of school medical advising in every way superior to the older plan of medical inspecting; should all physicians who serve schools have some preservice instruction in school organization and administration; what methods have been found effective for procuring the correction of physical defects found on medical examination; how can the physical education program be adapted to the varying health needs of the individual children, and how can the health teaching program and the health service program best be coordinated?

A Conference on the Cooperation of the Physician in the School Health and Physical Education Program was held October 16 to 18 under the auspices of the American Medical Association. Since the National Conference for Cooperation in Health Education published its *Suggested School Health Policies* (October 1945) great strides have been made in clarifying our thinking with regard to school health services. This Conference* should further facilitate the process as the result of the pooled efforts of physicians and public health workers, teachers, administrators and health educators. Editorial, Journ. A.M.A., Sept. 20, 1947, p. 160.

*We hope to publish some of the material from this Conference.—Ed.

* * * * *

Diphtheria,—The chief points brought out in the outbreak described by Fanning are (1) the possibility of an alarming outbreak of diphtheria in a highly immunized community (94 per cent previously immunized, 80 per cent Schick negative) (2) the failure

of previous immunization to protect against a severe attack in certain cases and (3) the occurrence of a high proportion of cases among Schick-negative reactors. The outbreak occurred in a private day school for girls. On the basis of observations in this outbreak, the author emphasizes the necessity for repeated doses of antigen during the whole of school life. The interval suggested between doses is three years. The limited value of the Schick test as a measure of immunity is pointed out. British Med. Jour. as abstracted in Jour. A.M.A., June 28, 1947, p. 835.

* * * * *

BIBLIOGRAPHY

Athletics,—Safety in Athletics, *Floyd, Frank S., Deaver, George G., and Eastwood, Floyd R.*, W. B. Saunders Co., Philadelphia, 1936.

Athletic Injuries, Prevention, Diagnosis and Treatment. *Thorndike, Augustus, M.D.*, Lea & Febiger, Philadelphia, 1938.

The Control of Football Injuries, *Stevens, Marion A., M.D., and Phelps, Winthrop, M.D.*, A. S. Barnes & Co., New York, 1933.

Athletic and Related Injuries, *Augustus Thorndike, Jr., M.D.*, The New England Journal of Medicine, August 1, 1940, pp. 180-185.

Health Safeguards in the Athletic Program, from School Health Policies. Report of the National Committee, 1945, p. 31.

During the last ten years, the following articles and abstracts have appeared in the Journal of School Health. Rereading them will help us:

Practices in High School Athletics, *C. O. Jackson*, September 1937, p. 151

Muscle Injuries, *Clifton W. Henson, M.D.*, Sept., 1937, p. 157

Elementary School Track Meets, Sept., 1937, p. 162

Editorial—Sanitation in Athletics, Sept. 1937, p. 173

Medical Supervision of Athletics, Sept. 1937, p. 176

Athletic Heart, Sept. 1937, p. 177

Basketball Is Too Strenuous, Feb. 1938, p. 51

The Control of Football Injuries in High School, *James T. O'Shea*, Sept. 1938, p. 190

Injuries in Physical Education: Causes, Prevention and Care, *Karl Weber*, Sept. 1938, p. 181

The Physician Considers Physical Fitness Tests, *Charles H. Keene, M.D.*, Sept. 1939, p. 185

Effects of Basketball on Junior High School Boys, *A. B. Bowyer and N. S. Anderson,* May 1939, p. 147 and Nov. 1939, p. 285

The School Cleans Up Its "Gym". *Lulu V. Cline, R.N.,* Sept. 1939, p. 207

Administration of High School Athletics, *Charles E. Forsythe,* Prentice-Hall, Inc. Reviewed in Journ. School Health, May 1939, p. 152

Blood Pressure Studies on Basketball Players in Olean, N. Y., *C. A. Greenleaf, M.D.,* Feb. 1940, p. 50

State High School Athletic Contests, *Resolution of A.A.H.P. E.R.,* Jan. 1941, p. 30

Interscholastic Athletic Insurance, the Portland, Oregon, Interscholastic Athletic Insurance Plan. *Eldon J. Jenne,* American School Board Journal. Abstract by C. L. Outland, Journ. School Health, Feb. 1943, p. 52

A Study of the Varsity Basketball Squad at the Kenmore Senior High School, Kenmore, New York, *Adfur E. Mains, M.D.,* Sept. 1943, p. 231

The Lure of the "Letter", Editorial, Health Education Journal, Los Angeles Forum School Health, Nov. 1943, p. 231

The Range of the Normal Heart in Athletics, *J. W. Wilcie, M.D.,* an abstract by John E. Burke, M.D., April 1945, p. 95

Danger Areas in Physical Education, *C. L. Lowman, M.D.,* Feb. 1945, p. 45

Football Fatalities. Journ. Am. Med. Assn., Feb. 10, 1946, p. 348, Abstracted in Journ. School Health, April 1945, p. 100

Athletic Injuries Benefit Plan, *P. F. Newman, and A. E. Mames* the Wisconsin Plan. March 1946, p. 61

New York State Athletic Plan. March 1946, p. 65

Students Learn to Officiate, March 1946, p. 69

Sprains in Athletics, June 1946, p. 167

Courses for "Sports Physicians", June 1946, p. 176

Football Fatalities: Feb. 1946, p. 45

Orthopedic Facts About Football, *Harold E. Crowe, M.D.,* Sept. 1947, p. 187

* * * * *

MEETINGS

The 1948 Annual Meeting of the **American School Health Association** with the American Public Health Association will be held in Boston, Massachusetts.

American Association for Health, Physical Education and Recreation, St. Louis, Mo., April, 1948.